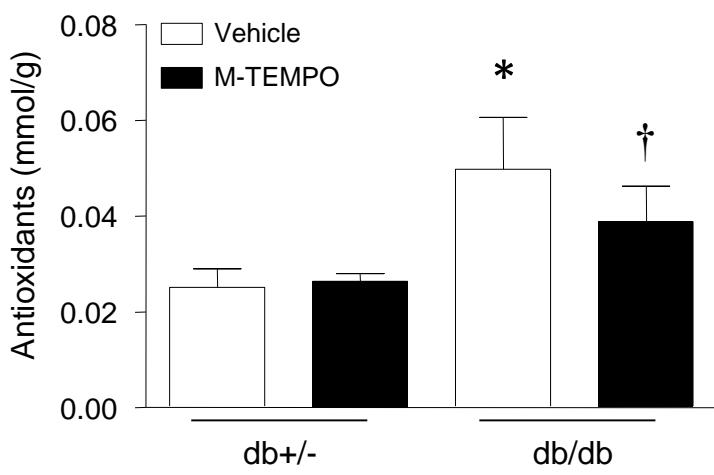
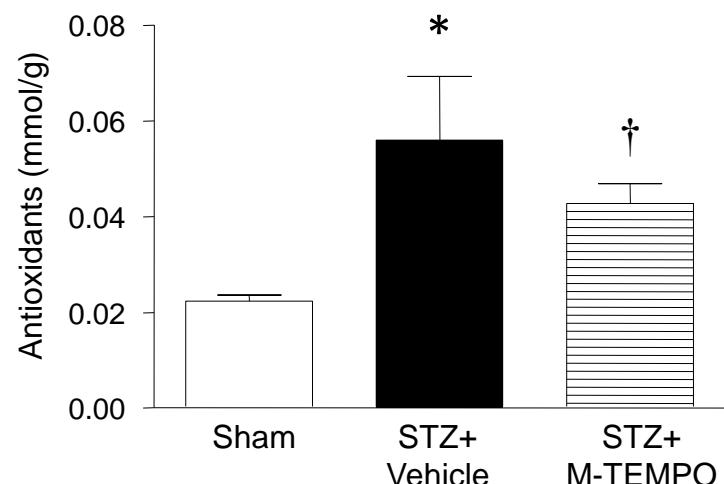


# Supplemental figure 1

A

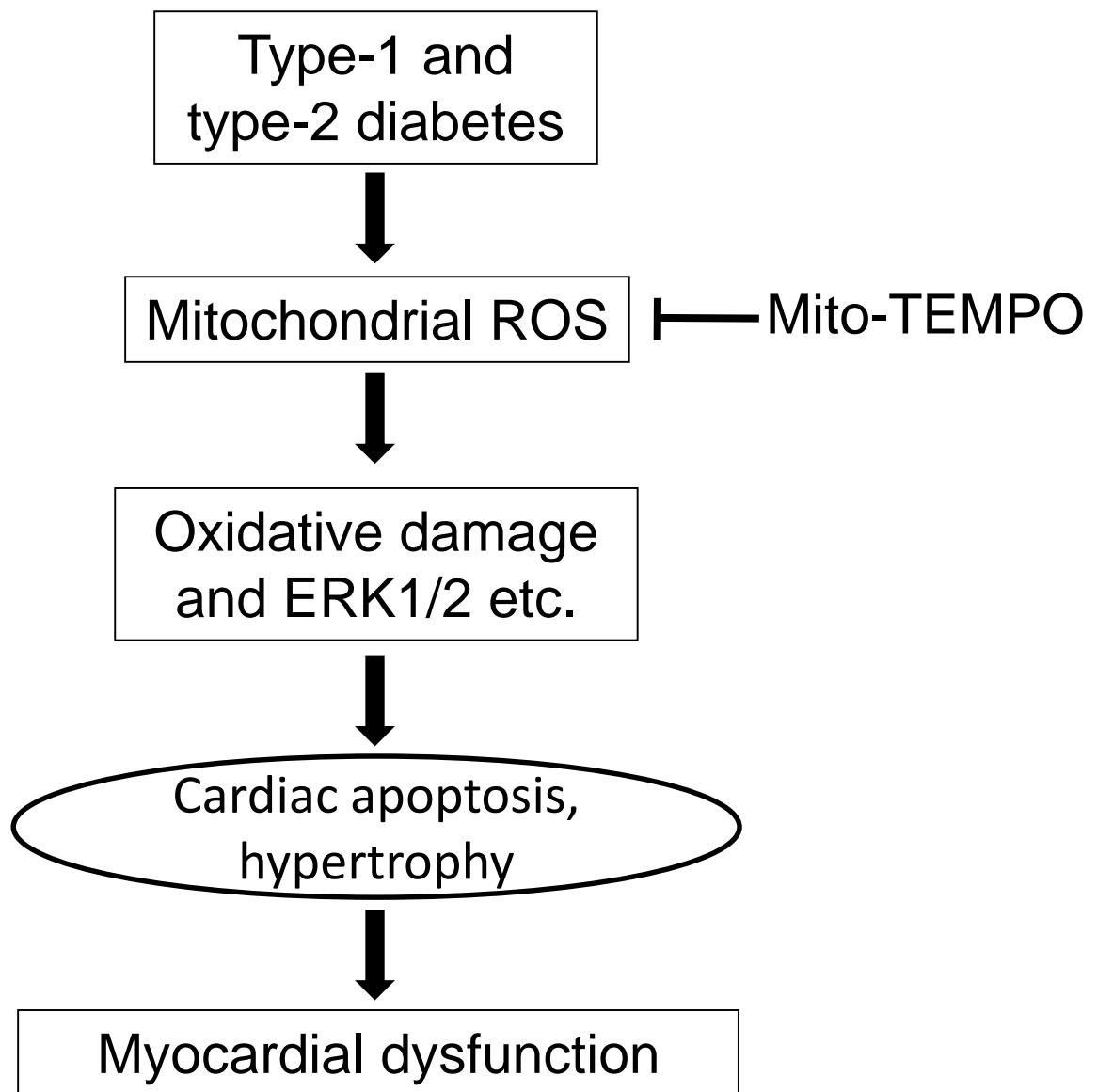


B



**Supplemental figure 1. Effect of mito-TEMPO on total antioxidant capacity in db/db mice and STZ-injected mice.** The total antioxidant capacity was increased in db/db (A) and STZ-treated mouse hearts (B), but was reduced by mito-TEMPO (M-TEMPO). Data are means  $\pm$  SD;  $n = 6-8$ . \* $P < 0.05$  versus vehicle in db+/- or sham and † $P < 0.05$  versus vehicle in db/db or STZ.

## Supplemental figure 2



**Supplemental figure 2. Diagrammatic illustration of the proposed mechanisms of mito-TEMPO protection in type-1 and type-2 diabetic cardiomyopathy.** Diabetes induces mitochondrial ROS generation. ROS-induced oxidative damage and ROS-mediated activation of signaling contribute to cardiac apoptosis, hypertrophy and dysfunction.

Supplemental Table 1: General information in db/db and db+/- mice receiving mito-TEMPO

	Body weight (g)	Heart weight (mg)	Tibia length (mm)	Heart weight/Tibia length (mg/mm)	Blood glucose (mM)
db+/- + Vehicle	25.84±3.71	117.67±25.42	17.65±0.51	6.64±1.25	8.17±1.19
db+/- + mito-TEMPO	24.92±3.13	114.01±19.64	17.32±0.45	6.58±0.93	7.73±2.71
db/db + Vehicle	52.61±4.83	124.67±12.26	17.14±0.58	7.28±0.79	29.08±4.07
db/db + mito-TEMPO	55.34±5.82	125.86±14.40	16.82±0.64	7.47±0.69	24.00±4.23

Supplemental Table 2: General information in STZ-injected mice receiving mito-TEMPO

	Body weight(g)	Heart weight(mg)	Heart/Body weight (mg/g)	Blood glucose (mM)
Sham	29.89±2.96	132.28±15.36	4.42±0.43	5.82±2.67
STZ + Vehicle	26.33±3.48	125.50±18.56	4.77±0.29	28.02±5.02
STZ + mito-TEMPO	24.78±2.73	120.20±10.18	4.87±0.31	30.34±2.81

Supplemental Table 3: Intake of food and water in mice receiving mito-TEMPO

	Food Intake (g)	Water Consumption (ml)
Vehicle	4.2±0.2	12.6±2.5
Mito-TEMPO	4.5±0.5	14.1±2.2

Supplemental Table 4: Parameters of echocardiographic analysis in db/db and db+/- mice receiving mito-TEMPO

	Ratio of E/A	Fractional Shortening (%)	Ejection Fraction (%)	End-systolic diameter (mm)	End-diastolic diameter (mm)
db+/- + Vehicle	1.95±0.09	50.5±2.61	82.4±2.66	1.88±0.3	3.79±0.43
db+/- + mito-TEMPO	1.92±0.1	50.89±2.82	82.67±2.56	1.9±0.28	3.88±0.48
db/db + Vehicle	1.41±0.39*	44.75±6.91	76.16±7.43	2.05±0.33	3.71±0.26
db/db + mito-TEMPO	1.93±0.06†	49.14±1.79	81.23±1.87	1.88±0.2	3.69±0.29

(\* P < 0.05 vs db+/- + Vehicle and † P < 0.05 vs db/db + Vehicle)

Supplemental Table 5: Parameters of echocardiographic analysis in STZ-injected mice receiving mito-TEMPO

	Ratio of E/A	Fractional Shortening (%)	Ejection Fraction (%)	End-systolic diameter (mm)	End-diastolic diameter (mm)
Sham	1.91±0.06	48±1.58	80.03±1.53	2.03±0.19	3.91±0.34
STZ + Vehicle	1.21±0.12*	31.26±7.34*	59.35±11.41*	2.56±0.58*	3.69±0.47
STZ + mito-TEMPO	1.86±0.09†	47.68±2.28†	80.05±2.47†	1.8±0.23†	3.43±0.37

(\* P < 0.05 vs Sham and † P < 0.05 vs STZ + Vehicle)